CLAIM AMENDMENTS

1-9. (Canceled)

10. (New) A regulatable spring-and-damper system in a vehicle, comprising a spring element and a damping element mounted in parallel,

wherein one of the elements is adjustable,

wherein, to realize a semi-active system, the spring element is passive and the damping element is configured with a damping characteristic that can be regulated in a variable manner,

wherein the semi-active system can be described according to a force profile (F_S) such that

$$F_S = -c \cdot z - d_u \cdot \dot{z}$$

,

where c denotes a spring constant of the passive spring element, d_u denotes a damping value that can be regulated in a variable manner, z denotes a state variable of the system, and $\dot{z}$ denotes the derivative with respect to time of the state variable,

wherein the damping element is regulated by the damping value (d_u) following at least approximately the relationship

$$d_u = \frac{-c \cdot z + f(z, \dot{z}, u, \dot{u})}{\dot{z}}$$

,

where u denotes a manipulated variable, $\dot{u}$ denotes the derivative with respect to time of the manipulated variable, and f denotes a known function,

wherein the function (f) is known from an actively regulatable reference system with an adjustable final control element and the force profile (F_R) of the reference system can be described by the relationship

$$F_R = -f(z, \dot{z}, u, \dot{u})$$
, and

wherein the manipulated variable (u) or the derivative with respect to time ($\dot{u}$) of the manipulated variable of the adjustable final control element is determinable in a closed-loop and open-loop control unit according to a stored mathematical relationship.

11. (New) The spring-and-damper system as claimed in claim 10, wherein the damping value (d_u) is regulated according to an approximation function

$$d_u \approx \frac{\dot{z}}{\mathrm{limit}\left[\dot{z}^2\right]_v^\infty}\left\{-c \cdot z + f(z, \dot{z}, u, \dot{u})\right\}$$
,

where $\mathrm{limit}\left[\dot{z}^2\right]_v^\infty$ denotes a lower, permissible limit (v) and an upper limit (∞) for a square of the rate of the state variable (z).

12. (New) The spring-and-damper system as claimed in claim 10, wherein the spring constant (c) of the passive spring element, in the case of a gas spring, follows the relationship

$$c = \left(\frac{p_{FS}}{p_0} \right)^{\frac{k+1}{k}} c_0$$
,

where p_0 denotes a reference pressure, c_0 denotes the spring stiffness at the reference pressure, p_{FS} denotes the pressure in the gas accumulator of the spring element, and k denotes the isentropic exponent of the gas in the gas accumulator.

13. (New) The spring-and-damper system as claimed in claim 10, where, in the case of an actively regulatable reference system, a final control element is mounted in series with the passive spring element and a passive damping element is mounted in parallel with the passive spring element and the final control element, the system can be described by the function

$$f = d \cdot \dot{z} + c(z - u)$$
,

and the damping value (d_u) of the regulatable damping element is regulated according to the relationship

$$d_u = \frac{-c \cdot z + f}{\dot{z}} = d - \frac{c \cdot u}{\dot{z}}$$
.

14. (New) The spring-and-damper system as claimed in claim 10, where, in the case of an actively regulatable reference system, a passive damping element is mounted in parallel with the passive spring element and a final

control element is mounted in series with both the passive spring and the passive damping elements, the system can be described by the function

$$f = d(\dot{z} - \dot{u}) + c(z - u)$$

,

and the damping value (d_u) of the regulatable damping element is regulated according to the relationship

$$d_u = \frac{-c \cdot z + f}{\dot{z}} = d - \frac{d \cdot \dot{u} + c \cdot u}{\dot{z}}$$

.

15. (New) The spring-and-damper system as claimed in claim 14, wherein, to realize a semi-active, hydropneumatic spring strut as an adjustable damping element, a regulatable throttle is arranged in a line between a displacer and a hydraulic side of a hydropneumatic spring accumulator as the spring element, and wherein the damping value (d_u) is regulatable by adjustment of the throttle.

16. (New) The spring-and-damper system as claimed in claim 15, wherein the derivative with respect to time ($\dot{u}$) of the manipulated variable is proportional to a volumetric flow of oil (Q_{AHP}) through the adjustable final control element of the reference system according to the relationship

$$\dot{u} = \frac{Q_{AHP}}{A_{HK}} \quad ,$$

where A_{HK} denotes the surface area of the main chamber of the displacer.

17. (New) The spring-and-damper system as claimed in claim 10, wherein the manipulated variable (u) is high-pass-filtered in the closed-loop and open-loop control unit according to the relationship

$$u_{HP} = \frac{T_{HP} \cdot \dot{u}}{T_{HP} \cdot \dot{u} + u}$$

where T_{HP} denotes a gain factor which is determined according to the relationship

$$T_{HP} = \frac{1}{2 \cdot \pi \cdot f_{HP}} \quad .$$

in which f_{HP} denotes the cutoff frequency of the high-pass filter.

18. (New) The spring-and-damper system as claimed in claim 11, wherein the spring constant (c) of the passive spring element, in the case of a gas spring, follows the relationship

$$c = \left(\frac{p_{FS}}{p_0} \right)^{\frac{k+1}{k}} c_0 \quad ,$$

where p_0 denotes a reference pressure, c_0 denotes the spring stiffness at the reference pressure, p_{FS} denotes the pressure in the gas accumulator of the spring element, and k denotes the isentropic exponent of the gas in the gas accumulator.

19. (New) The spring-and-damper system as claimed in claim 11, where in the case of an actively regulatable reference system, a final control element is mounted in series with the passive spring element and a passive damping element is mounted in parallel with the passive spring element and the final control element, the system can be described by the function

$$f = d \cdot \dot{z} + c(z - u),$$

and the damping value (d_u) of the regulatable damping element is regulated according to the relationship

$$d_u = \frac{-c \cdot z + f}{\dot{z}} = d - \frac{c \cdot u}{\dot{z}}.$$

20. (New) The spring-and-damper system as claimed in claim 12, where in the case of an actively regulatable reference system, a final control element is mounted in series with the passive spring element and a passive damping element is mounted in parallel with the passive spring element and the final control element, the system can be described by the function

$$f = d \cdot \dot{z} + c(z - u),$$

and the damping value (d_u) of the regulatable damping element is regulated according to the relationship

$$d_u = \frac{-c \cdot z + f}{\dot{z}} = d - \frac{c \cdot u}{\dot{z}}.$$

21. (New) The spring-and-damper system as claimed in claim 11, where, in the case of an actively regulatable reference system, a passive damping element is mounted in parallel with the passive spring element and a final control element is mounted in series with both the passive spring and the passive damping elements, the system can be described by the function

$$f = d(\dot{z} - \dot{u}) + c(z - u)$$

,

and the damping value (d_u) of the regulatable damping element is regulated according to the relationship

$$d_u = \frac{-c \cdot z + f}{\dot{z}} = d - \frac{d \cdot \dot{u} + c \cdot u}{\dot{z}}$$

.

22. (New) The spring-and-damper system as claimed in claim 12, where, in the case of an actively regulatable reference system, a passive damping element is mounted in parallel with the passive spring element and a final control element is mounted in series with both the passive spring and the passive damping elements, the system can be described by the function

$$f = d(\dot{z} - \dot{u}) + c(z - u)$$

,

and the damping value (d_u) of the regulatable damping element is regulated according to the relationship

$$d_u = \frac{-c \cdot z + f}{\dot{z}} = d - \frac{d \cdot \dot{u} + c \cdot u}{\dot{z}}$$

.

23. (New) The spring-and-damper system as claimed in claim 13, where, in the case of an actively regulatable reference system, a passive damping element is mounted in parallel with the passive spring element and a final control element is mounted in series with both the passive spring and the passive damping elements, the system can be described by the function

$$f = d(\dot{z} - \dot{u}) + c(z - u)$$

,

and the damping value (d_u) of the regulatable damping element is regulated according to the relationship

$$d_u = \frac{-c \cdot z + f}{\dot{z}} = d - \frac{d \cdot \dot{u} + c \cdot u}{\dot{z}}$$

.

24. (New) The spring-and-damper system as claimed in claim 21, wherein, to realize a semi-active, hydropneumatic spring strut as an adjustable damping element, a regulatable throttle is arranged in a line between a displacer and a hydraulic side of a hydropneumatic spring accumulator as the spring element, and wherein the damping value (d_u) is regulatable by adjustment of the throttle.

25. (New) The spring-and-damper system as claimed in claim 24, wherein the derivative with respect to time ($\dot{u}$) of the manipulated variable is proportional to a volumetric flow of oil (Q_{AHP}) through the adjustable final control element of the reference system according to the relationship

$$\dot{u} = \frac{Q_{AHP}}{A_{HK}} \quad ,$$

where A_{HK} denotes the surface area of the main chamber of the displacer.

26. (New) The spring-and-damper system as claimed in claim 22, wherein, to realize a semi-active, hydropneumatic spring strut as an adjustable damping element, a regulatable throttle is arranged in a line between a displacer and a hydraulic side of a hydropneumatic spring accumulator as the spring element, and wherein the damping value (d_u) is regulatable by adjustment of the throttle.

27. (New) The spring-and-damper system as claimed in claim 26, wherein the derivative with respect to time ($\dot{u}$) of the manipulated variable is proportional to a volumetric flow of oil (Q_{AHP}) through the adjustable final control element of the reference system according to the relationship

$$\dot{u} = \frac{Q_{AHP}}{A_{HK}} \quad ,$$

where A_{HK} denotes the surface area of the main chamber of the displacer.

28. (New) The spring-and-damper system as claimed in claim 11, wherein the manipulated variable (u) is high-pass-filtered in the closed-loop and open-loop control unit according to the relationship

$$u_{HP} = \frac{T_{HP} \cdot \dot{u}}{T_{HP} \cdot \dot{u} + u}$$

where T_{HP} denotes a gain factor which is determined according to the relationship

$$T_{HP} = \frac{1}{2 \cdot \pi \cdot f_{HP}}$$

in which f_{HP} denotes the cutoff frequency of the high-pass filter.

29. (New) A regulatable spring-and-damper system in a vehicle, comprising a spring element and a damping element mounted in parallel, one of the elements being adjustable, wherein to realize a semi-active system, the spring element is passive and the damping element is configured with a damping characteristic that can be regulated in a variable manner and the semi-active system can be described according to a force profile which can be represented as a function of a variable describing the spring constant of the passive spring element and/or of a variable describing a damping value that can be regulated in a variable manner and/or of a variable describing a state variable of the system and/or of a variable describing the derivative with respect to time of the state variable and in that the damping element is regulated by the damping value following at least approximately a relationship which can be represented as a function of the variable describing the spring constant of the passive spring element and/or of a manipulated variable and/or of a variable describing the

derivative with respect to time of the manipulated variable and/or of the variable describing the state variable of the system and/or of the variable describing the derivative with respect to time of the state variable, this relationship being based on a function which is known from an actively regulatable reference system with an adjustable final control element and the force profile of the reference system being able to be described according to a relationship which can be represented as a function of the manipulated variable and/or of the variable describing the derivative with respect to time of the manipulated variable and/or of the variable describing the state variable of the system and/or of the variable describing the derivative with respect to time of the state variable, with the manipulated variable and/or the variable of the adjustable final control element describing the derivative with respect to time of the manipulated variable being determinable in a closed-loop and open-loop control unit according to a stored mathematical relationship.